Sustainability and Environmental Management Practices

In view of the current well-justified focus on preserving our environmental resources for future generations, this section lists some of the departments' programs and procedures that help us and others to approach our surroundings in a spirit of responsibility and sensitivity.

Sustainability Programs

1. **Toxics Right-to-Know Program.** Eugene voters in 1996 adopted this program requiring public reporting of hazardous substance use by manufacturers. Since that time, data reported under the program has shown an upward trend in the overall use of hazardous substances, but a downward trend in releases of those substances to the environment. The program is managed under the Eugene Fire Marshal's Office.

2. **Sustainable design and construction.** Newer facilities – including the Thurston, Downtown, Santa Clara, Whiteaker, and Sheldon fire stations – all were designed and constructed to state-of-the-art standards for energy efficiency, incorporating sustainable building materials, maximum use of natural light and ventilation, solar water pre-heating, radiant heating in the equipment bays, advanced electrical control systems, high-efficiency motors and boilers, heat-recovery ventilation, and many other environmentally sensitive features.

3. **Class A burn building.** A 2002 Eugene bond measure enabled the department (in addition to building a new Downtown Fire Station) to purchase and install a permanent Class A concrete and tile burn building at the 2nd & Chambers campus. The burn building provides firefighters the opportunity to experience live fire conditions in a controlled setting without the air and groundwater contamination concerns of more traditional "burn-to-learn" exercises involving donated structures in the community. It is standard practice to use non-polluting fuels for training fires conducted in the burn building.

4. **Administrative office procedures.** Department-level administrative practices conform to or exceed standard sustainability guidelines, and include online rather than printed publications and reports (e.g., this report), default two-sided printing, recycling of paper and kitchen-related products, reduced use of the department's color printers, elimination of personal space heaters (replaced by energy-efficient heated footpads supplied by EWEB), purchase of energy-saving flat-screen computer monitors, and the provision of many sustainable construction features within the infrastructure of the administrative work environment.

5. **Use of bio-diesel.** In accordance with adopted City policy, Eugene Fire & EMS vehicles use bio-diesel fuel (B20) to the fullest extent possible. Conversion to this fuel type resulted in some problems for our medic units in 2006, and the decision was made that these units will continue run on normal diesel fuel until they are rotated out of service and replaced. The new medic units run on bio-diesel.

Environmental Management Practices

1. **Regional Hazardous Materials Team.** The departments maintain a fully-equipped Hazardous Materials Team that responds throughout Lane County under contract with the State of Oregon. By the end of this year, all 22 members of the team will be certified to the Hazardous Materials Technician level; most of the members already have this certification. The team is proficient in booming/damming/diking techniques, chemical over-packing (secondary containment), as well as recognition, monitoring, and neutralization of hazardous substance conditions. The Hazardous Materials Team maintains two 24-foot watershed protection trailers that are positions in close proximity to the McKenzie and Willamette Rivers. These trailers have over 500 feet each of hard floating booms and absorbent material, and are utilized to protect the waterways in Lane County.

Booms deployed on the Willamette River upriver from Eugene and Springfield to contain a spill when a fuel truck carrying 9,000 gallons of gas and diesel rolled over, releasing its contents into the watershed.

2. **Environmental protection as a tactical priority.** To the extent possible, when responding to fires or other emergencies, department personnel take steps to mitigate any negative effects on the environment that may be caused either by the incident or by the response. Most typically this takes the form of deploying booms to protect storm sewers from contaminated runoff, but groundwater protection from hazardous substances is also a consideration in some responses.

3. **Oil/water separator on the drill field.** Water and foam are used regularly in training drills occurring on the department's drill field at 2nd & Chambers. Water and oil are used in the routine testing and maintenance of the department's apparatus and equipment, much of which also takes place on the drill field. The west end of the drill field is equipped with a switch directing runoff to the sanitary sewer system when potential contaminants are released.

4. **Soy-based foam.** The departments began testing a soy-based penetrant foam in 2005, and has now nearly completed the conversion to this type of foam for all fire suppression apparatus. Although more expensive than the chemical foam formerly used, the new soy-based foam is far less toxic (preventing groundwater and stream contamination), is more compatible with the department's equipment (meaning fewer clogged or corroded lines and valves), and has proven to be equally effective as a fire suppression tool.

5. **Exhaust extraction systems.** All Eugene and Springfield fire stations are equipped with direct diesel exhaust extraction systems (vacuum apparatus that connect directly to vehicles' exhaust pipes when the vehicles are in the equipment bay). These systems help protect the health of firefighters and also prevent exhaust-related degradation of equipment stored in the bays. They are also equipped with filters to capture particulates before fumes are exhausted to the outside air. When apparatus are first started, there is a larger discharge of contaminants than is experienced after the engine is running.

6. **Storm/sanitary sewer switches.** The infrastructure at all fire stations in the metro area includes a switch to direct wastewater to either the storm sewer or sanitary sewer system, depending on its content. In the most common example, the water used to wash suppression apparatus, which contains cleansing agents as well as impurities, is directed to the sanitary sewer system as a matter of standard operating procedure.

7. **Electronic patient care reporting and record-keeping.** The departments continually seek to identify and implement measures that reduce consumption of paper. A recent major advancement in this area has been the move to electronic patient care reporting, both in the field and for billing purposes. Other measures are in place or are being considered.